major comorbidities (myocardial infarction 9.7 - 19.8%, diabetes 26.2 - 36.7%, hypertension 26.6 - 44.4%). HF incidence slightly increased (range 1992-99: 1.66% - 1.82%), while the length of stay dramatically decreased (7.3 – 5.5 days). Crude short and long-term mortality remained essentially unchanged. Adjusted analysis showed no clinically meaningful reduction in 30-day mortality. Long-term mortality fell in 1994, but had no further improvement for the rest of the observation period (Table).
Conclusion: Despite significant advances in management of HF, short-term prognosis remains unchanged, while the long-term prognosis has had no continuous improvement since 1994.

Year	Crude mortality (%)		Adjusted mortality (Odds Ratio, 95% confidence interval)	
	30-Day	**1-year**	**30-Day**	**1-year**
1992	11.00	32.47	N/A	N/A
1993	10.91	33.94	1.00 (referent)	1.00 (referent)
1994	10.57	31.68	0.99 (0.98 - 1.00)	0.91 (0.90 - 0.92)
1995	10.48	31.51	1.00 (0.98 - 1.01)	0.91 (0.90 - 0.92)
1996	10.30	31.42	0.99 (0.97 - 1.00)	0.91 (0.90 - 0.92)
1997	10.20	31.70	0.98 (0.97 - 0.99)	0.92 (0.92 - 0.93)
1998	10.22	31.82	0.99 (0.97 - 1.00)	0.93 (0.92 - 0.93)
1999	10.34	31.72	1.01 (1.00 - 1.02)	0.93 (0.92 - 0.94)

10:45 a.m.

885-2 The Burden of Vascular Disease in Long-Term Follow-Up of Elderly Myocardial Infarction Survivors

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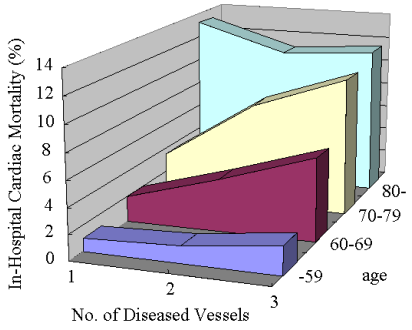
Background: Atherosclerosis manifests itself in a variety of vascular diseases, but research has generally focused on a single recurrent manifestation. As a result, the true risk of a vascular event, and thus the burden of vascular disease, following myocardial infarction (MI) may be underestimated. Our objective was to provide a national perspective of the burden of vascular events and mortality following MI among the elderly.
Methods: We examined 6-year rates of hospital readmission for ischemic stroke, heart failure (HF), MI, and mortality among all fee-for-service Medicare patients aged ≥ 65 years hospitalized with MI (ICD-9 410) in 1993. Unadjusted rates were calculated for each outcome by age group (65-74, 75-84, and 85+), gender, and race (white, black, other).
Results: There were a total of 233,845 hospitalizations (mean age 76.4 years; 56.5% age 75+; 47.3% women, and 89.3% Caucasian). The 6-year readmission rate was 6.8% for recurrent MI, 10.2% for HF, and 4.2% for stroke. MI, stroke, HF and death rates were consistently higher for women than men (7.0 vs. 6.6%, 4.4 vs. 4.0%, 11.6 vs. 9.0%, and 56.3 vs. 52.7). While rates by race were similar for MI and stroke, the HF readmission rates were highest for blacks (13.9% vs. 9.3% for others). Rates for MI and stroke increased gradually with increasing age (5.5%, 7.4%, and 9.8% respectively for MI and 3.5%, 4.7%, and 5.6% for stroke), but increased more dramatically for HF (7.5%, 11.5%, and 17.0%). All-cause mortality was 54.4%, and increased markedly with advancing age (39.2%, 59.5%, and 82.3% by age group).
Conclusion: Among elderly MI survivors, the rates of recurrent MI, stroke, and HF are considerable, especially for women. Increased age was associated with a consistent pattern of greater risk for vascular outcomes. Mortality increased from 39% among the youngest Medicare patients to 82% among the oldest Medicare patients. These results demonstrate the importance of including multiple vascular endpoints in public health initiatives to reduce the recurrence of vascular disease and death in elderly MI survivors.

11:00 a.m.

885-3 Correlation Between the Extent of Diseased Vessels and the Incidence of In-Hospital Cardiac Mortality in Acute Myocardial Infarction

Yasuhiro Ishii, Hiroshi Kasanuki, Masahiro Yagi, Jun-ichi Yamaguchi, Michitaka Nagashima, Hiroshi Ogawa, Tetsuya Sumiyoshi, Takashi Honda, Kazuo Haze, Toshinobu Horie, Tokyo Women's Medical University, Tokyo, Japan, HIJC Investigators, Tokyo, Japan

BACKGROUND: Multi-vessel disease and high age are said to be strong predictors of further cardiac events in ischemic heart disease. We sought to evaluate whether the number of diseased vessels correlates with the in-hospital cardiac mortality in different age groups of acute myocardial infarction (AMI) patients. METHODS and RESULTS: Out of 2,177 patients undergoing emergency coronary angiography in the Japanese Acute Myocardial Infarction (JAMI) registry (1999-2001) of 3,021 AMI patients, 2,063 patients without left main disease were evaluated. All the patients were divided into 4 subgroups according to the age (n=616 (<60y), 612 (60-69y), 603 (70-79y) and 232 (>or=80y)). In the subgroups less than 80y, higher incidence of the in-hospital cardiac mortality was observed according to the increase in the number of diseased vessels. In the elderly subgroup (>or=80y), the incidnece was always high, regardless of the number of diseased vessels (15/114=13%, 8/72=11% and 5/43=12% in single, double and triple vessel disease, respectively). In this elderly subgroup, the causes of cardiac mortality in single vessel disease were mainly cardiac ruptures (8/15=53%), while they were mostly heart failures in multi-vessel disease (11/13=85%). CONCLUSIONS: In AMI patients less than 80y, the in-hospital cardiac mortality increases according to the extent of diseased vessels. In elderly patients (>or=80y), the incidence does not correlate with the number of diseased vessels.



11:15 a.m.

885-4 The Severity of Mitral Annular Calcification Is Associated With Prevalent Cardiovascular Disease in the Elderly: The Cardiovascular Health Study

Eddy Barasch, Emily K. Marino, Gregory L. Burke, Paulo H. Chaves, Teri A. Manolio, John S. Gottdiener, St. Francis Hospital, Stony Brook University, Roslyn, NY, CHS Coordinating Center, Washington University, Seattle, WA

Background: Mitral annular calcification (MAC) is associated with cardiovascular disease (CVD). It is uncertain whether the prevalence of CVD is associated with the severity of MAC. Aim: We hypotesize that there is an incremental association between the severity of MAC and prevalent CVD in the elderly. Methods: In the Cardiovascular Health Study, a prospective community based study of risk factors for CVD in subjects >/= age 65, 3929 participants (mean age 76 ± 5 yrs, 60% women) had an echo at 1994-95 visit suitable for MAC evaluation. MAC was identified in 1640 (41.7%, mean age 77+/- 5 yrs, 61 % women). Severity of MAC was prospectively classified as: “mild” (n = 1495) - limited increased echodensity involving less than 1/3 of the ring; “moderate”(n= 133) - marked echodensity involving 1/3 or more of the ring; and
“severe” (n =12) - marked echodensity involving ½ or more of ring. Moderate and severe MAC were grouped together for analysis. Logistic regression analysis of prevalent disease at the time of the echo (table) was performed adjusting for age, gender, race, history of diabetes, hypertension, renal insufficiency, carotid stenosis >/= 25%, ankle arm index </= 0.9, FEV1, and electrocardiographic LV mass. No MAC (n = 2389) was the comparison group for both mild and mod/severe MAC. Conclusions: In highly adjusted models, there is a graded association between the extent of MAC and prevalent CVD. In the presence of moderate/severe MAC, the odds of prevalent MI, stroke, angina and congestive heart failure is doubled.

MAC severity	Myocardial infarction N = 415	Stroke N = 233	Angina N = 837	Congestive heart failure N = 272
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Mild	1.31 (1.02, 1.68)	1.37 (0.98, 1.91)	1.01 (0.84, 1.23)	1.27 (0.92, 1.75)
Mod/Severe	2.31 (1.36, 3.92)	2.39 (1.23, 4.65)	1.86 (1.21, 1.88)	2.40 (1.30, 4.43)

11:30 a.m.

885-5 Obesity as an Independent Predictor of First Atrial Fibrillation in Adults Aged ≥65 Years

Marion E. Barnes, Yoko Miyasaka, A. Gabriela Rosales, Kent E. Bailey, James B. Seward, Teresa S.M. Tsang, Mayo Clinic, Rochester, MN

Background:
Obesity as a risk factor for atrial fibrillation (AF) has remained controversial. Some studies have shown that body mass index (BMI) is an independent predictor of AF, while others have not.
Methods:
At the Mayo Clinic, 6,078 Olmsted County, MN, residents aged ≥65 years underwent ≥1 transthoracic echocardiogram during 1990-1998. For the purpose of this study, we excluded patients with prior AF or other atrial arrhythmia, stroke, congenital heart anomaly, and pacemaker implantation. A random sample of 2,200 patients from a total of 4,124 eligible patients was generated. After review of the medical records, 279 patients were excluded due to the presence of exclusion criteria not detected from the administrative databases. BMI data and or follow-up information was not available in 72 patients. The remaining 1,849 patients comprised the study population.
Results:
Of the 1,849 patients (750 male, 1099 female; mean age 75+/-7 years), 221(12%)developed AF after a mean follow up of 4.0+/-2.7 years. BMI (per 10 kg/m2, hazards ratio (HR) 1.39; 95%CI 1.070-1.79; P=0.0135) was independently predictive of AF, adjusting for age (P<0.0001) and sex (P=0.0371). In a multivariate model, BMI remained independently